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1892/93

Maryland
Agricultural
College.



CIRCULAR OF INFORMATION.

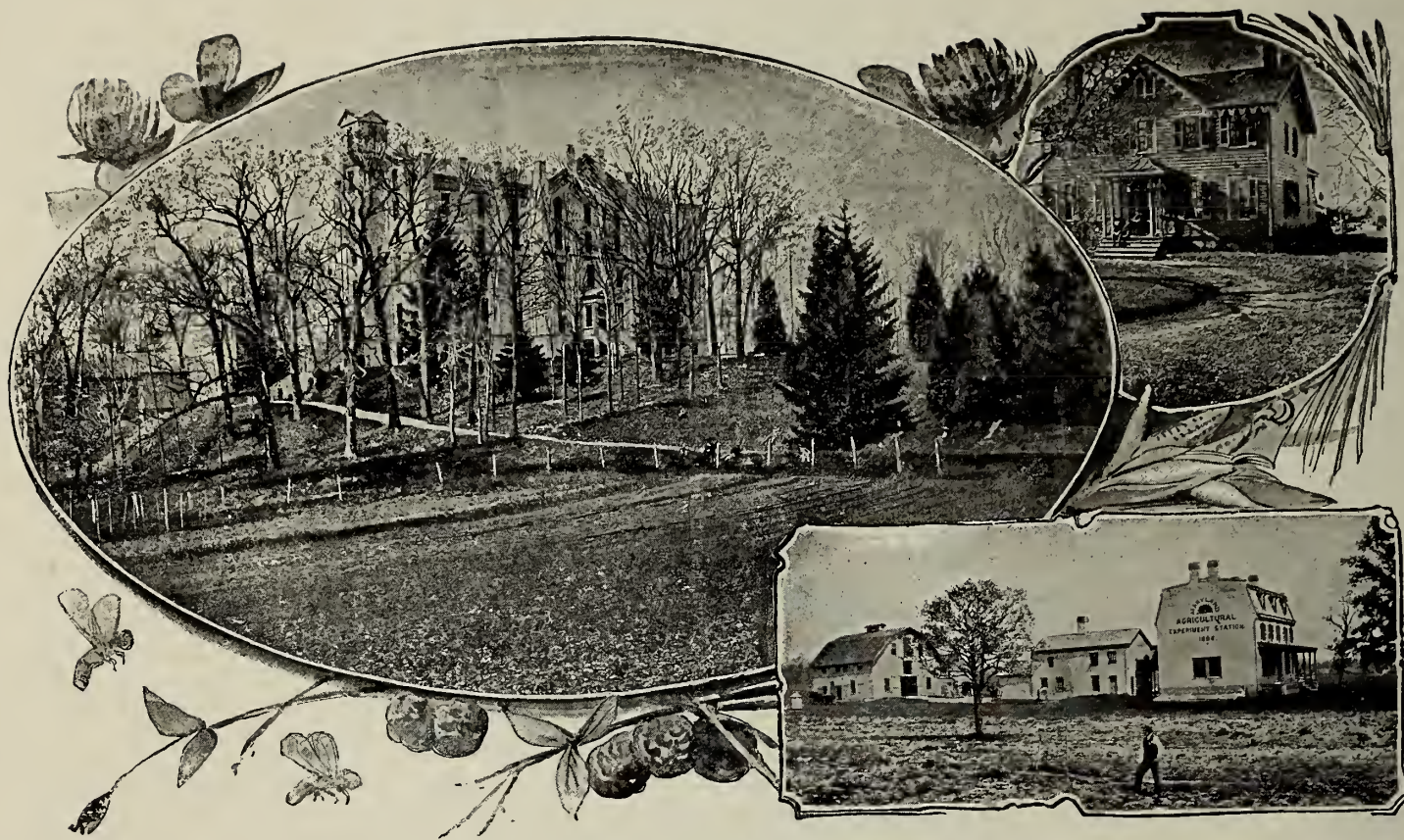
Maryland Agricultural College,

COLLEGE STATION,

Prince George's County, = = = Maryland.

✦ ✦ ✦ 1892-3. ✦ ✦ ✦





GROUP OF COLLEGE BUILDINGS.

△ † △ CALENDAR, 1893. △ † △

WEDNESDAY, SEPTEMBER 13.—Opening of the session and examination of candidates.

FRIDAY, DECEMBER 22.—Commencement of Christmas vacation.

1894.

TUESDAY, JANUARY 2.—Resumption of College exercises.

THURSDAY, FEBRUARY 22.—Washington's Birthday.

THURSDAY NOON, MARCH 22.—Easter vacation.

TUESDAY 8 A. M., MARCH 27.—Resumption of College exercises.

SUNDAY, JUNE 10.—Baccalaureate Sermon.

MONDAY, JUNE 11.—Athletic day.

TUESDAY, JUNE 12.—Class day.

TUESDAY, JUNE 12.—Evening, Mercer Literary Society.

WEDNESDAY, JUNE 13, 10 A. M.—Alumni meeting.

WEDNESDAY, JUNE 13, 2 P. M.—Commencement exercises.

WEDNESDAY, JUNE 13, 9 P. M.—Farewell Hop to Senior Class.

BOARD OF TRUSTEES.

Members Ex-officio Under State Law.

HIS EXCELLENCY, FRANK BROWN, GOVERNOR,					PRESIDENT OF THE BOARD.
HON. JOHN P. POE,	-	-	-	-	ATTORNEY GENERAL.
" MARION DEK. SMITH,	-	-	-	-	COMPTROLLER OF THE TREASURY.
" EDWARD LLOYD,	-	-	-	-	PRESIDENT OF THE SENATE.
" MURRAY VANDIVER,	-	-	-	-	SPEAKER OF THE HOUSE OF DELEGATES.
" SPENCER C. JONES,	-	-	-	-	STATE TREASURER.

Members Elected by Stockholders.

HON. J. CARROLL WALSH,	-	-	-	-	JERUSALEM MILLS, HARFORD CO., MD.
" WILMOT JOHNSON,	-	-	-	-	CATONSVILLE, BALTIMORE CO., MD.
CHAS. B. CALVERT, Esq.,	-	-	-	-	COLLEGE STATION, PRINCE GEORGE'S CO., MD.
ALLEN DODGE, Esq.,	-	-	-	-	WASHINGTON, D. C.
CHAS. H. STANLEY, Esq.,	-	-	-	-	LAUREL, PRINCE GEORGE'S CO., MD.

Members by Executive Appointment.

C. J. PURNELL, Esq., SNOW HILL, WORCESTER CO., MD.,	-	-	-	-	-	-	<i>Term Expires.</i> 1894.
DAVID SEIBERT, Esq., CLEAR SPRING, WASHINGTON CO., MD.,	-	-	-	-	-	-	1894.
JEREMIAH P. SILVER, Esq., GLENNVILLE, HARFORD CO., MD.,	-	-	-	-	-	-	1896.
WILLIAM T. BIEDLER, Esq., BALTIMORE, MD.,	-	-	-	-	-	-	1896.
HON. ROBT. MOSS, ANNAPOLIS, MD.,	-	-	-	-	-	-	1898.
HON. CHAS. H. EVANS, BALTIMORE, MD.,	-	-	-	-	-	-	1898.

R. W. SILVESTER, President and Professor of Mathematics.

JOHN S. GRISARD, 2nd Lieut., U. S. A., Commandant of Cadets and Chair of Military Science.

RICHARD H. ALVEY,

Chair of English and Civics.

W. H. ZIMMERMAN, A. M.,

Chair of Physics.

W. T. L. TALIAFERRO,

Chair of Agriculture.

HENRY B. McDONNELL, M. D., B. S.,

Chair of Chemistry.

MARTIN P. SCOTT, M. D.,

Chair of Natural Science. (Animal Life.)

JAMES S. ROBINSON,

Chair of Natural Science. (Plant Life.)

THOMAS H. SPENCE,

Chair of Languages.

JOHN S. GRISARD, 2nd Lieut., U. S. A.,

Chair of Military Science.

HENRY T. HARRISON,

Preparatory Department.

H. M. STRICKLER,

Chair of Physical Culture.

H. C. SHERMAN, B. S.,

Assistant in Chemistry.

Chair of Mechanics and Applied Mathematics.

ROBERT WARD, Lecturer on Veterinary Science.

Lecturers on various topics employed during the year, to be provided for.

CATALOGUE OF STUDENTS.

SENIOR CLASS.

Hagerstown,	Alvey, Charles	Maryland.
Mt. Washington,	Buckley, Samuel Sutherland	Maryland.
Rockville,	Graff, Gustavus Yewell	Maryland.
Urbana,	Lawson, John William	Frederick Co., Md.
Ash Grove,	Sherman, Henry C.	Virginia.

JUNIOR CLASS.

Burketsville,	Ausherman, Clement Colfax	Frederick Co., Md.
South River,	Best, Hezekiah	Maryland.
Williamsport,	Bomberger, Franklin Byers	Washington Co., Md.
Pr. Fredericktown,	Bowen, Rufus Hamilton	Calvert Co., Md.
Box 614, No. 1845 9th St., N. W.,	Brown, Arthur Sydney	Washington, D. C.

Mt. Washington,	Buckley, John Sutherland	Maryland.
Jarrettsville,	Cairnes, Charles William	Harford Co., Md.
Dickerson's,	Chiswell, Benjamin Maurice	Montgomery Co., Md.
College Park,	Church, Edgar	Maryland.
Fairland,	Conley, Charles Henry	Montgomery Co., Md.
Townshend,	Dent, Howard Mortin	Prince George's Co., Md.
Port Deposit,	Foran, Thomas Edward	Maryland.
Leonardtown,	Key, Sothoron	Maryland.
Highland,	Pue, Richard Ridgley	Howard Co., Md.
Westover,	Sudler, Mervin Tushman	Maryland.
Cumberland,	Weimer, Clay Henry	Maryland.

CATALOGUE OF STUDENTS.—Continued.

SOPHOMORE CLASS.

Annapolis,	Bannon, Joseph G.	Anne Arundel Co., Md.	Pocomoke City,	Jones, Henry Claude	Worcester Co., Md.
Upper Marlboro,	Clagett, Guygher Harry	Prince George's Co., Md.	Piedmont,	McCandlish, Lindsay	West Virginia.
Laurel,	Compton, Barnes, Jr.	Prince George's Co., Md.	Florence,	McDonnell, Curtis Cris	Washington Co., Pa.
Taneytown,	Crapster, Wm. B.	Carroll Co., Md.	Halls,	Mullikin, Clarence	Prince George's Co., Md.
College Park,	Church, Irwin	Maryland.	Morristown,	Nesbit, William	Hamblin Co., Tenn.
Bryantown,	Dent, Warren Levi	Charles Co., Md.	Freedom,	Prough, Pearse Choate	Carroll Co., Md.
Fort Washington,	Edelen, George Stud	Prince George's Co., Md.	Cambridge,	Skinner, William Woolford	Dorchester Co., Md.
College Park,	Eversfield, Donald	Maryland.	Piedmont,	Sligar, Richard Edward	West Virginia.
Ingleside,	Graham, Harry Rembert	Queen Anne's Co., Md.	Denton,	Stevens, Charles Easten	Caroline Co., Md.
Highlands,	Harding, Samuel Herbert	Howard Co., Md.	Powhatan,	Timanus, John Jacob	Baltimore Co., Md.
904 S. Street,	Hinrichs, William	Washington, D. C.	Upper Marlboro,	Wilson, George Washington	Prince George's Co., Md.
			Frederick City,	Worthington, A. B.	Maryland

CATALOGUE OF STUDENTS. — Continued.

FRESHMAN CLASS.

Upper Marlboro,	Beale, Robert Buchanan	Prince George's Co., Md.	28 Grant Place,	Harris, George M.	Washington, D. C.
Holly Wood,	Bond, John Thomas	St. Mary's Co., Md.	Cole P. O.,	Mitchell, Parker	Harford Co., Md.
334 N. Charles Street,	Brown, William Stanley	Baltimore, Md.	239 10th Street, N. E.,	Oertly, Fred Ernest	Washington, D. C.
Taneytown,	Crapster, Thaddeus Grison	Carroll Co., Md.	1031 McCulloh Street,	Leef, Henry Albert	Baltimore, Md.
Cherriton,	Colonna, Aylett Jackson	Virginia.	Cisco,	Leary, Clifton E.	North Carolina.
Stockton,	deWaal, Harry Besson	Worcester Co., Md.	Savage,	Hearn, Arthur Clifford	Howard Co., Md.
Port Tobacco,	Digges, Walter Mitchell	Charles Co., Md.	College Park,	Johnston, Walter B.	Prince George's Co., Md.
Laurel,	Duvall, Robert Lee	Prince George's Co., Md.	2218 Oak Street,	Owens, Herbert Harris	Baltimore, Md.
Waterford,	Fox, Omar Lee	Virginia.	St. Leonard's,	Parran, Archibald	Calvert Co., Md.
Cumberland,	Fuller, Clifton E.	Maryland.	834 N. Howard Street,	Pflaging, Charles	Baltimore, Md.
1231 11th Street, S. E.,	Haines, Maholan N.	Washington, D. C.	Laytonsville,	Riggs, William Caudy	Montgomery Co., Md.
			Brightseat,	Roberts, William W.	Prince George's Co., Md.

CATALOGUE OF STUDENTS.—Continued.

College Park,	Robertson, Walter H.	Maryland.	College Park,	Bellis, George	Prince George's, Md.
127 E. Street, N. E.,	Rollins, Sherman T.	Washington, D. C.	607 Sixth Street, N. W.,	Berlin, Wm. H.	Washington, D. C.
No. 11 Grant Place,	Talty, James Blake	Washington, D. C.	Prince George's Co.,	Bowie, W. B.	Maryland.
St. Margaret P. O.,	Tydings, Roy V.	Anne Arundel Co., Md.	Leeland,	Brown, Washington Beale	Prince George's Co., Md.
Hyattsville,	Walker, Clarence N.	Prince George's Co., Md.	1519 Kingston Place,	Browne, Marshall	Washington, D. C.
Belair,	Watts, Kennedy	Maryland.	College Park,	Calvert, Charles Baltimore	Maryland.
P. O. Box 214, Baltimore,	Williams, Roland Clifton	Maryland.	College Park,	Church, G.	Prince George's Co., Md.
Cordova,	Wooters, Arthur William	Talbot Co.	1518 31st Street,	Fickling, Thomas White	Georgetown, D. C.
PREPARATORY DEPARTMENT.			Takoma Park,	Ingraham, Prentiss	District of Columbia.
216 N. Capital Street,	Arthur, Albert O.	Washington, D. C.	College Park,	Johnston, Robert Stanley	Maryland.
Cooksey,	Barber, Walter Yates	Charles Co., Md.	1217 L Street, N. W.,	Kreuttner, Joseph W.	Washington, D. C.

CATALOGUE OF STUDENTS.—Continued.

Lake, Levin W.					
109 N. Charles Street,	Baltimore, Md.	Canarsie,	Schenck, Gavin Wm.		Long Island.
Lake, Lewis Williamson			Sherman, Franklin Jr.		Fairfax Co., Va.
109 N. Charles Street,	Baltimore, Md.	Ash Grove,	Shipley, John H.		Maryland.
Lindsay, Edge Parke		College Park,	Sollers, James G.		Calvert Co., Md.
Portsmouth,	Virginia.	Sollers P. O.,	Stanford, Harry Rider		Washington, D. C.
McIntyre, Edwood Warner	Washington, D. C.	214 Delaware Avenue, N. E.,	Walters, Daniel R.		Washington, D. C.
222 C Street, N. W.,	Baltimore Co., Md.	1837 R Street, N. W.,	Wilsie, Jerome Carlton		Prince George's Co., Md.
Mordecai, George Patterson		Hyattsville,	Wootton, William Turner		Montgomery Co., Md.
Lutherville,	Washington, D. C.	Poolesville,	Zimmerman, Clifton		Washington, D. C.
Munroe, Lamar	Washington, D. C.	925 P Street, N. W.,			
Oertly, Zwingli	Washington, D. C.				
239 10th Street, N. E.,					
Parsons, John Hillary	St. Mary's Co., Md.				
Morganza P. O.,					
Pywell, Robert	Prince George's Co., Md.				
College Park,					
Roberts, Richard	Prince George's Co., Md.				
Brightseat,					
Robinson, James B.					
College Park,	Maryland.				

GRADUATES.

GRADUATES, 1893.

H. C. SHERMAN, B. S.,

CHAS. ALVEY, B. S.,

S. S. BUCKLEY, B. S.,

J. W. LAWSON, B. S.,

G. Y. GRAFF, B. S.

GRADUATES, 1892.

G. H. CALVERT, A. B.,

JOHN D. BROOKS, A. B.,

JAMES E. RAY, A. B.,

S. W. GAMBRILL, B. S.,

NATHAN CHILDS, B. S.,

E. D. JOHNSON, A. B.,

L. W. BESLEY, A. B.



MEDALS AND PRIZES AWARDED.

Commencement Exercises, June 14, 1893.

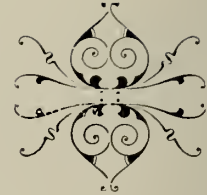
- 1.—Gold Medal by the President. Prize Essay.
Subject: "Agriculture as a factor in America's highest development."
Awarded P. C. Prough.

- 2.—Gold Medal by the President and Professor of English and Civics. Prize Essay.
Subject: "American Citizenship. What constitutes its highest type."
Awarded C. C. Ausherman.

- 3.—Set of Shakespeare's Works, by Professor of English and Civics.
Subject: "Some recent tendencies in American Literature."
Awarded Henry Claude Jones.

- 4.—Gold Medal by Professor of Agriculture. Ploughing Contest.
Awarded Parker Mitchell.

- 6.—Set of Fiske's American Revolution, by the President. Prize Essay. Subject: "Revolutionary Period of American History."
Awarded Baltimore Calvert.





SENIOR CLASS FOR YEAR '93-'94.

JOHN. S. GRISARD, 2ND LIEUT., U. S. A., COMMANDANT CORPS OF CADETS.

MAJOR COMMANDING BATTALION,—S. KEY.

STAFF AND NON-COMMISSIONED STAFF.

<i>First Lieutenant and Adjutant,</i>	-	-	-	-	-	C. C. AUSERMAN.
<i>First Lieutenant and Quartermaster,</i>	-	-	-	-	-	H. BEST.
<i>Sergeant-Major.</i>	-	-	-	-	-	T. E. FORAN.
<i>Quartermaster-Sergeant,</i>	-	-	-	-	-	G. H. CLAGETT.

Color Guard.

Sergeant.....J. S. BUCKLEY.
Corporals.....} C. S. MULLIKIN,
 } H. H. OWENS,

Drum Corps.

Sergeant R. E. SLIGAR.
Corporal.....G. M. HARRIS.

LIGHT BATTERY.

Captain R. R. PUE.
Sergeants.....} B. COMPTON, JR.,
 } G. S. EDELEN.

COMPANY "A."

F. B. BOMBERGER,

C. W. CAIRNES,

C. H. WEIMER,

H. C. JONES,

L. McCANDLISH,

C. C. McDONNELL,

J. J. TIMANUS,

P. C. PROUGH,

C. H. CONLEY,

W. W. ROBERTS,

H. B. DEWAAL,

J. T. BOND,

M. N. HAINES,

J. B. TALTY,

Captains,

First Lieutenants,

Second Lieutenants,

First Sergeants,

Sergeants,

Corporals,

COMPANY "B."

B. M. CHISWELL.

H. M. DENT.

M. T. SUDLER.

W. W. SKINNER.

S. H. HARDING,

W. B. CRAPSTER,

H. R. GRAHAM,

A. B. WORTHINGTON,

G. W. WILSON,

S. T. ROLLINS,

P. MITCHELL,

C. E. FULLER,

F. E. OERTLY,

W. M. DIGGES.

NOTE I.—Officers and non-commissioned officers are selected from the students who have been most studious, most soldier-like in the performance of their duties, and most exemplary in their general deportment. In general, the officers are appointed from the Senior class, the Sergeants from the Junior and the Corporals from the Sophomore class.

NOTE II.—It is intended to reorganize into four companies as soon as the new students are sufficiently well drilled to be assigned to companies.



AS IT APPEARS ON COMPLETION.

The student of history must have been forcibly impressed with the fact, that the people of Maryland have been the pioneers in all those works of material advancement which have marked the greatness and grandness of our country. Upon the decline of the virgin fertility of her soil, her agriculturists soon began to realize the importance of some concerted plan to restore its wonted vigor. In 1856 many of her sons, by private subscription, laid the foundation of the present college, the second of its kind in the country, and the first commenced under private subscription. Their breadth of view and comprehensive conception is plainly shown in their own words when they outline its functions: "It is not supposed, then, that what we designate an Agricultural College aims merely at professional instruction in agriculture. The plan undoubtedly embraces this, but it is far more comprehensive. It claims for the farmer or mechanic, or for whomsoever its care may be sought first, his development as a man trained and fitted to the full extent of his capacity for all the duties of *a man and a citizen*." On this line, with an emphasized course in agriculture and the mechanic arts, the present administration wishes to continue the college on its course to the attainment of its highest ideal. The public spirit of those private citizens was subsequently reinforced by special appropriations by the State and the Acts of the United States Government of July 2, 1862, and August 30, 1890.

LOCATION.

Our former forefathers builded wisely in choosing the location of the college. Located three-quarters of a mile from College Station, on the Washington Branch of the B. & O. R. R., it is easily accessible from all points. College Hill, the situation of the college buildings, is a beautiful eminence overlooking wide stretches of country. The surrounding farm embraces 286 acres of land, forty of which are in woodland, and a large part of the remainder under cultivation. This has been more sinned against than sinning. The character of soil on the college farm has been a popular line of criticism. This is without foundation. The topographical nature of the land makes drainage comparatively easy. The physical condition of the soil is poor. Its present chemical condition is a loud protest against the continuance of past methods of cultivation. Still enough is left of its former glory to point to better days in the near future, if only proper treatment is accorded it. All these facts, together with the close proximity of Washington and Baltimore, both fast becoming educational centres, with their accretion of scientific knowledge and their necessary accompaniments of learned men, libraries and kindred educational institutions, point to this situation as admirably adapted for the location of an institution of this character.

BUILDINGS.

The main building, of which a cut is inclosed, is a massive structure of six stories, in the design of the founders intended to be only one wing of the building proper. The day, it is to be hoped, is not far distant when the entire building will be completed. A cut of this is incorporated to stimulate pride to the completion of work so wisely begun over a third of a century ago. The present building contains limited accommodations for professors, class-rooms, chapel, parlors, armory and students' quarters; not affording more than sufficient room for 100 cadets. During the past year this was taxed to its utmost capacity. The dormitories are spacious and well ventilated, and heated by steam. Water is on each floor. Waterclosets and bath-rooms are conveniently located; in fact, every provision is made for the maintenance of the proper sanitary condition of the building. A physician makes daily visits to the building, at which time a careful examination is made of all students in any physically disordered condition, and professional services are given without further expense than the fee exacted of every matriculate student boarding at the institution.

Every department is fitted up with the most modern appliances for instruction. The chemical laboratory is a detached building, well equipped with facilities for instruction. A cut of class-room work is found on another page. The gymnasium and reading-room (see p. 43), a building erected during the past year, is a handsome structure 60x40x30, of

two stories, the lower floor given to physical culture, the upper story to reading-room and library, *desiderata* long and painfully felt in our college work. These provide indispensable adjuncts to the production of the final product we seek.

The farm buildings are inadequate to the proper accommodation of valuable stock, of which the college has the nucleus in several lines. The Agricultural Experiment Station, an entirely separate and distinct organization, has its offices in a separate, substantial brick building about 100 rods from the college. Here our young men have the advantage of the researches made by specialists in every line of agricultural work.

DISCIPLINE.

Obedience to properly constituted authority, and respect for it, is the first lesson not only for a soldier, but also for a good citizen to learn. Our students are such in the embryonic state. We find that the average young man yields to these requirements, when he appreciates the fact that each law he is called upon to observe has as its foundation the principle of justice to all. Autocratic government may do in time of peril when delay is hazardous, but that obedience, which comes from the appreciation of the elements of right as embodied in the law, is the only system of government from which springs that *esprit de corps*, which, when once established in a body of men or youth, becomes self-regulating. If a young man of the age of fifteen or sixteen years, or older,

cannot be governed by such a spirit when he comes in contact with it, such a school as this is not the place for him. The principle that he is the best disciplinarian, who finds the least occasion to correct or punish, is our idea of discipline.

RELIGIOUS EXERCISES.

Exercises of a religious nature are conducted every morning in the chapel. Also every Sunday evening some clergyman visits the college and conducts some form of service. No sectarian influence is permitted. Every boarding student is expected to be present on these occasions.

EXPENSE.

We have three grades of students: First, regular matriculates. Second, State scholarship. Third, day students.

The first have every advantage of the institution on the payment of \$144, in parts and at times as specified below.

The second enjoy similar privileges on the payment of \$49 as specified.

Of the third the same may be said on the payment of \$24.

The college furnishes books to all students with the distinct understanding that they are to be used and not abused. They are to be returned at the end of each year, and if found defaced, they are to be paid for and the collections are to be made in same manner as is provided for collecting other college dues. Each room is furnished with a chair, a bedstead, mattress and wardrobe for each occupant. A wash-

stand and table is to be used jointly. All other necessary articles are to be furnished by the student. The college takes a receipt from each student as to the proper condition of the room on his assuming charge, and any destruction or abuse of college property must be paid for by the student or students in whose possession it is placed.

A medical fee of \$4 is charged each boarding student, which must be paid on entrance, by order of the Board of Trustees at their June meeting. This covers all expense for medical attendance.

Students of the first class make payments as follows: \$40 on entering, \$40 November 15th, \$40 February 1st, \$20 April 1st. Students of the second class, \$22.50 on entering, \$22.50 February 1st. Students of the third class, \$12 on entering, \$12 February 1st.

The very moderate sums charged makes it absolutely necessary that payments be made strictly in advance, and we earnestly ask a strict compliance with the regulation.

SCHOLARSHIP.

By legal enactment each Senatorial District is entitled to one scholarship, really worth to the student \$95, the charge being only \$45 for the enjoyment of every scholastic privilege. Notice will be duly given to the school authorities of the respective districts of vacancies as they occur. It is necessary for the person enjoying this privilege that he be a resident of a district to which he is accredited.

POSTOFFICE.

The Postoffice address is Agricultural College, Prince George's County, Md. Telegrams and express, College Station, B. & O. R. R.

COURSES OF STUDY.

At the June (1893) meeting of the Board of Trustees, it was deemed proper to present to those seeking the offices of the college in the matter of education the choice of one of four courses. In the following pages these are specially outlined. It will be noted that English is an important factor in each. The spirit of this college has recognized the failure of our educational system in this particular, and must insist upon a careful study of this most important branch as the foundation for others to rest upon. It is the vehicle of all our thoughts, and for these thoughts to be properly understood they must be properly transmitted. It will be noted that we have a classical course. We wish here, in this connection, to say that it is offered in deference to the wishes of some. The animating spirit of our life, the emphasized and accentuated courses of our educational work, are the Agricultural, Mechanical and Scientific. This is as it should be. The age demands it. The spirit of the times is "not 'Arms and Men,' but *tools*, and the *man* is now and is henceforth to be the great epic of the world." The explicit direction of the grantors of those sums which make our advanced work a possibility, is plain. We cannot if we would, and would not if we could, divert it from its legitimate course.

THE MERCER LITERARY SOCIETY.

This society has as its object the mutual improvement of its members in literary pursuits and in debate, and the encouragement of whatever tends to the development of a literary spirit in the college. A room for the meetings of the society is provided, and regular weekly meetings, on Friday evenings, are held.

All new students are eligible for election as members. A small entrance fee and light monthly dues are required to defray the current expenses of the organization.

The society, during the past scholastic year, made very successful progress with an increased number of members. Several creditable public entertainments were held in the college hall, consisting of debates, the reading of original papers by members and orations and recitations.

It is proposed that the society shall have permanent quarters in the new gymnasium building, where much better facilities for successful work will be afforded.



AGRICULTURAL COURSE.

STUDIES.	FRESHMEN.		SOPHOMORE.		JUNIOR.		SENIOR.	
	First Term.	Second Term.	First Term.	Second Term.	First Term.	Second Term.	First Term.	Second Term.
ENGLISH.....	5 Hours. Recitation.	5 Hours. Recitation.	4 Hours. Recitation.	4 Hours. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Recitation.
HISTORY.....	2 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Reading.	2 Hours. Reading.	2 Hours. Reading.	2 Hours. Reading.	5 Hours. Civics. Recitation.	5 Hours. Civics. Recitation.
AGRICULTURE.....	3 Hours. Recitation. 2 Hours. Practical.	3 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 1 Hour. Practical.	2 Hours. Recitation. 1 Hour. Practical.	3 Hours. Recitation. 2 Hours. Practical.	3 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.
MATHEMATICS.....	3 Hours. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Recitation.	1 Hour. Recitation.	1 Hour. Recitation.
MODERN LANGUAGES.....	4 Hours. German Recitation.	3 Hours. German Recitation.	4 Hours. German Recitation.	3 Hours. German Recitation.	3 Hours. French Recitation.	3 Hours. French Recitation.	3 Hours. French Recitation.	3 Hours. French Recitation.
WOOD AND IRON WORK.....	1 Hour. Wood Work. Practical.	1 Hour. Wood Work. Practical.	1 Hour. Iron Work. Practical.	1 Hour. Iron Work. Practical.	2 Hours. Mechanics. Recitation.	2 Hours. Mechanics. Recitation.	2 Hours. Mechanics. Recitation.	Optional.
BOOKKEEPING	1 Hour. Practical.	1 Hour. Practical.	.....	.....	.....	.....	.....	.....
MILITARY SCIENCE.. ..	4 Hours. Practical and Theoretical.	4 Hours. Practical and Theoretical.	1 Hour. Recitation. 4 Hours. Practical.	1 Hour. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.
NATURAL HISTORY.....	3 Hours. Botany. Recitation.	3 Hours. Phys. Geog. and Geology. Recitation.	2 Hours. Physiology. Recitation.	2 Hours. Botany. Practical.	2 Hours. Zoology. Recitation. 2 Hours. Botany. Prac.	4 Hours. Physiology. Practical.	2 Hours. Biology. Recitation. 2 Hours. Botany.	Optional.
PHYSICS	1 Hour. Mechanical Powers. Recitation.	1 Hour. Mechanical Powers. Recitation.	2 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	Optional.
CHEMISTRY.....	.....	.....	2 Hours. Recitation. 1 Hour. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	Optional.
DRAWING.....	2 Hours. Free-hand. Practical.	2 Hours. Free-hand. Practical.	2 Hours. Mechanical. Practical.	.....	.....	1 Hour. Mechanical Practical.	1 Hour. Mechanical. Practical.	Optional.
	31	30	31	30	35	36	34	21

MECHANICAL COURSE.

STUDIES.	FRESHMEN.		SOPHOMORE.		JUNIOR.		SENIOR.	
	First Term.	Second Term.	First Term.	Second Term.	First Term.	Second Term.	First Term.	Second Term.
ENGLISH	5 Hours. Recitation.	5 Hours. Recitation.	4 Hours. Recitation.	4 Hours. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Recitation.
HISTORY	2 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Reading.	2 Hours. Reading.	2 Hours. Reading.	2 Hours. Reading.	5 Hours. Civics Recitation.	5 Hours. Civics. Recitation.
MECHANICS.....					3 Hours. Recitation.	4 Hours. Recitation.	5 Hours. Recitation.	5 Hours. Recitation.
WOOD AND IRON WORK.....	2 Hours. Practical Wood Work.	2 Hours. Practical Wood Work.	2 Hours. Practical Wood Work.	2 Hours. Practical Wood Work.	2 Hours. Practical Iron Works.	2 Hours. Practical Iron Work.	2 Hours. Practical Iron Work.	2 Hours. Practical Iron Works.
MATHEMATICS.....	1 Hour. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	2 Hours. Recitation.	4 Hours. Recitation.	4 Hours. Recitation.	1 Hour. Recitation.
MODERN LANGUAGES.....	4 Hours. German. Recitation.	3 Hours. German. Recitation.	4 Hours. German. Recitation.	3 Hours. German. Recitation.	3 Hours. French. Recitation.	3 Hours. French. Recitation.	3 Hours. French. Recitation.	Optional.
BOOKKEEPING	1 Hour. Practical.	1 Hour. Practical.						
PHYSICS	1 Hour. Mechanical Powers. Recitation.	1 Hour. Mechanical Powers. Recitation.	2 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	Optional.
MILITARY SCIENCE.....	4 Hours. Practical and Theoretical.	4 Hours. Practical and Theoretical.	1 Hour. Recitation. 2 Hours. Practical.	1 Hour. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.
NATURAL HISTORY.....	3 Hours. Botany. Recitation.	3 Hours. Phys. Geog. and Geology. Recitation.	2 Hours. Physiology. Recitation.	2 Hours. Botony. Practical.				
CHEMISTRY.....			2 Hours. Recitation. 1 Hour. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.			
DRAWING.....	2 Hours. Free-hand. Practical.	2 Hours. Free-hand. Practical.	2 Hours. Mechanical. Practical.	2 Hours. Mechanical. Practical.	3 Hours. Mechanical. Practical.	3 Hours. Mechanical. Practical.	4 Hours. Mechanical. Practical.	4 Hours. Mechanical. Practical.
	27	26	31	29	31	31	35	20

SCIENTIFIC COURSE.

STUDIES.	FRESHMEN.		SOPHOMORE.		JUNIOR.		SENIOR.	
	First Term.	Second Term.	First Term.	Second Term.	First Term.	Second Term.	First Term.	Second Term.
ENGLISH.....	5 Hours. Recitation.	5 Hours. Recitation.	4 Hours. Recitation.	4 Hours. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Recitation.
HISTORY.....	2 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Reading.	2 Hours. Reading.	2 Hours. Reading.	2 Hours. Reading.	5 Hours. Civics. Recitation.	5 Hours. Civics. Recitation.
MODERN LANGUAGES.....	4 Hours. German Recitation.	3 Hours. German. Recitation.	4 Hours. German. Recitation.	3 Hours. German. Recitation.	3 Hours. French. Recitation.	3 Hours. French. Recitation.	3 Hours. French. Recitation.	Optional.
CHEMISTRY.....			2 Hours. Recitation. 1 Hour. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	Optional.
PHYSICS.....	1 Hour. Mechanical Powers. Recitation.	1 Hour. Mechanical Powers. Recitation.	2 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 2 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	Optional.
MATHEMATICS.....	3 Hours. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Recitation.	1 Hour. Recitation.	Optional.
MILITARY SCIENCE.....	4 Hours. Practical and Theoretical.	4 Hours. Practical and Theoretical.	1 Hour. Recitation. 4 Hours. Practical.	1 Hour. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.
BOOKKEEPING.....	1 Hour. Practical.	1 Hour. Practical.	.....	.....	.....	.....	.....	.....
NATURAL HISTORY.....	3 Hours. Botany. Recitation.	3 Hours. Phys. Geog. and Geology. Recitation.	2 Hours. Physiology. Recitation.	2 Hours. Botany. Practical.	2 Hours. Zoology. Recitation. 2 Hours. Botany. Practical.	4 Hours. Zoology. Practical.	2 Hours. Biology Recitation. 2 Hours. Botany.	Optional.
DRAWING.....	2 Hours. Free-hand. Practical.	2 Hours. Free-hand. Practical.	2 Hours. Mechanical. Practical.	.....	.....	1 Hour. Mechanical. Practical.	2 Hours. Mechanical. Practical.	.....
	25	24	27	25	28	29	34	13

CLASSICAL COURSE.

STUDIES.	FRESHMEN.		SOPHOMORE.		JUNIOR.		SENIOR.	
	First Term.	Second Term.	First Term.	Second Term.	First Term.	Second Term.	First Term.	Second Term.
ENGLISH.....	5 Hours. Recitation.	5 Hours. Recitation.	4 Hours. Recitation.	4 Hours. Recitation.	5 Hours. Recitation.	5 Hours. Recitation.	4 Hours. Recitation.	2 Hours. Recitation.
HISTORY.....	2 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Reading.	2 Hours. Reading.	2 Hours. Reading.	2 Hours. Reading.	5 Hours. Civics. Recitation.	5 Hours. Civics. Recitation.
LATIN	4 Hours. Recitation.	4 Hours. Recitation.	4 Hours. Recitation.	4 Hours. Recitation.	5 Hours. Recitation.	5 Hours. Recitation.	5 Hours. Recitation.	4 Hours. Recitation.
MODERN LANGUAGES.....	4 Hours. German. Recitation.	3 Hours. German. Recitation.	4 Hours. German. Recitation.	3 Hours. German. Recitation.	3 Hours. French. Recitation.	3 Hours. French. Recitation.	4 Hours. French. Recitation.	4 Hours. French. Recitation.
MATHEMATICS	3 Hours. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	3 Hours. Recitation.	2 Hours. Recitation.	2 Hours. Recitation.	1 Hour. Recitation.	Optional.
PHYSICS			2 Hours. Recitation.	2 Hours. Recitation.				
CHEMISTRY.....			2 Hours. Recitation. 1 Hour. Practical.	2 Hours. Recitation. 2 Hours. Practical.				
MILITARY SCIENCE.....	4 Hours. Practical and Theoretical.	4 Hours. Practical and Theoretical.	1 Hour. Recitation. 4 Hours. Practical.	1 Hour. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.	2 Hours. Recitation. 4 Hours. Practical.
BOOKKEEPING	1 Hour. Practical.	1 Hour. Practical.	2 Hours. Physiology.	2 Hours. Botany.				
NATURAL HISTORY.....		3 Hours. Phys. Geog. and Geology. Recitations.						
DRAWING.....	2 Hours. Free-hand. Practical.	2 Hours. Free-hand. Practical.	2 Hours. Mechanical. Practical.					
	25	27	31	29	23	23	25	21



LECTURE ROOM OF ENGLISH.

DEPARTMENTS OF STUDY.

MATHEMATICAL DEPARTMENT.

Prof. R. W. Silvester, President.

Mathematics is the basis on which our scientific information rests. A knowledge of the study is therefore necessary as much from the utilitarian point of view, as from the mental training its acquisition gives. Its importance as a factor in our college course, takes its rise from the former consideration. All instruction in this department is with a view of equipping the students for the practical work soon to follow.

The uses of arithmetic, book-keeping, algebra, geometry (plane and solid), trigonometry (plane and spherical), are self-confessed.

Descriptive geometry in its application to mechanical drawing; analytical geometry, differential and integral calculus, in their many and varied applications to mechanics and engineering, each and all speak for themselves in their claim upon the attention of the student who intends to place himself on the vantage ground of an educated man. These are some of the considerations which have led to the continued course of instruction, outlined in each of the four courses.

In the applied mathematics, book-keeping is taught every student. No matter what vocation a man intends to follow, a knowledge of business forms, and a method of systematic accounts, is a *sine qua non* to success.

To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running old lines, and a level for the purpose of drainage, are necessary qualifications of the agriculturist who wishes success of the highest type to crown his efforts.

In fine, we wish all our theories to bear their fruits. Thus, and thus alone, can we expect to win a place in the confidence and appreciation of an enlightened and progressive community.

DEPARTMENT OF ENGLISH AND POLITICAL SCIENCE.

Prof. R. H. Alvey.

Instruction in this department seeks to accomplish two distinct, and yet closely connected results: to prepare the student, by a course of training in the history, structure and use of the English language, for the highest development of his mental powers, and for the complex business and social relations of life; and further, to fit him for the intelligent exercise of his active duties as a man and as a citizen. The work of the department may thus be outlined as two distinct courses of instruction.

Recognizing the fact that training in English is of primary importance to the student in pursuing his studies in

all other branches of learning, our effort, from the beginning of his first college year, is to familiarize him with the structure and idioms of the language, and to render him fluent and accurate in its use. In the freshman class, continued exercises in synthesis, analysis and practical rhetoric extend throughout the year. Weekly composition work and critical examination of the same serve to render the student more exact in his choice of words, and more easy and natural in his manner of expression. Attention is also given to word-structure, roots, prefixes and suffixes, and to the use of synonyms. The student's power of expression and of interpretation of the thoughts of others is sought to be strengthened by frequent practice with selections from the best English authors.

The sophomore year is devoted to the study of literature, although rhetorical work in the form of essays upon literary topics runs through the entire year. The study of English Literature is topically pursued, with collateral readings from the typical authors of each period. The course is completed by a series of lectures upon American Literature. This work will be greatly facilitated by additions to the college library during the summer.

In the junior year, the study of technical rhetoric and logic is taken up. Text-books upon these subjects are supplemented by continuous practical exercises in style and composition, and in logical analysis. Essays upon assigned topics are required in each term.

In the senior year, instruction in English takes the form of critical readings from standard authors, with the object of creating and forming in the student some degree of literary taste and culture; that may stimulate and guide him in his reading after leaving college. The thesis work of this year is in the nature of papers upon questions of political and social science and current topics.

The course in history proper runs through three years, and leads up to the study of Political Science and Civil Government, in the senior year. In the freshmen year, a history of Rome is begun and completed, as preparing students for the intelligent reading of the Latin authors in the classical department, and affording the best training for acquiring method in historical study. Essays and reference work accompany this course. The sophomore and junior classes pursue a course of historical reading, covering in outline Ancient, Mediæval and Modern History, with specially assigned reference work. The equipment of the department for this course in works of reference, maps, charts, etc., will soon be complete.

In the senior year, the primary object of the course is the preparation for citizenship. It is an indisputable fact, that whatever may be the peculiar function of any institution of learning, it must invariably fall short of the fulfillment of its duty to its graduates and to society, if it sends out young men with no knowledge of the government and laws under which they live, and without an appreciation of the obliga-



PHYSICAL LABORATORY.

tions which the rights of citizenship entail upon them. Especially is this true of colleges of Agriculture; the educated farmer must be an intelligent citizen if he is to be of any real service to that branch of society whose interests he represents. With this idea, our course in civics is made as comprehensive in its scope, and as practical in its application to every-day life as is at all possible.

The first term in the senior year is devoted to the study of Civil Government in the United States, with weekly lectures on the Constitution of the United States, its history, its interpretation, and the laws made under it. This is followed by a study of the principles of Political Economy, and their application to questions of industrial and social interest. Lectures and discussions of current topics are given throughout the year, and the students are encouraged to investigate and formulate their opinions for themselves. During the latter part of the second term a history of political parties in the United States is read. In the same term is given a course of informal lectures upon the elements of Municipal and Business Law, banking, commercial paper, mortgages, deeds, wills, etc., the object being to enable the student intelligently to conduct such simple business transactions as any land-holder or tax-payer may be called upon to perform, and to avoid as far as possible that stumbling block of so many American farmers—incessant and disastrous litigation.

PHYSICS. EXPERIMENTAL AND APPLIED.

Prof. Wm. H. Zimmerman, A. M.

So rapid is the progress made in every department of physical science, and so intimately are its principles connected with every human industry, and even life itself, that the course of instruction in this branch of study should be as thorough and as *eminently* practical as opportunity and time will permit. With this fact in view, the physical department of the College has recently received marked attention. Its equipment in apparatus and other appointments has raised it to a rank creditable to the institution, and very inviting, interesting and instructive to the student; and no accessible funds will be withheld, keeping its rank less than that of our foremost and best equipped colleges.

Our course of instruction in physics aims to make clearly understood the facts and principles of the physical forces operating in nature, and to demonstrate by the most approved methods their industrial uses and economic applications in the arts and occupations of every-day life.

It embraces hydraulics, pneumatics, heat, light, sound, electricity and magnetism—including a quite thorough practical course in electro-metallurgy, the mechanics of electricity and chemistry of photography.

The method of instruction is by means of topical recita-

tions, class-quizzings, blackboard delineations, lectures, copiously illustrated by experiments and by constructive and testing laboratory practice.

Suitable notes and original monographs, illustrated by neatly executed drawings, are required for periodical examinations, to be marked according to their values.

Great care is taken throughout the course to array all the various facts and principles into such natural grouping, that their intimate relations may readily be perceived, and the unity of science strongly emphasized.

AGRICULTURAL DEPARTMENT.

Prof. W. L. Taliaferro.

In the Agricultural Department of the College the end sought to be attained is to make of the young men, pursuing the course, progressive practical farmers, who, comprehending the scientific facts of agriculture, may, by means of that knowledge, be enabled to raise more wheat or more potatoes from an acre of land, and fatten more beef on a given amount of food.

With this end in view, the course of instruction embraces, so far as is possible, both the theory and practice of agriculture. The theory is taught in the lecture-room by means of approved text-books and oral lectures, illustrated by laboratory experiments. The practice is taught in the

fields and stables. The practical part is, of course, mostly limited to observation and explanation. Even if it were desirable that the students should do the manual work of



PLOUGHING CONTEST.

the farm, it would be impracticable through lack of time. As a matter of fact, a majority of the students are familiar with ordinary farming operations before they enter the college.



DITCHING MACHINE OF EXPERIMENT STATION.

Throughout the course an effort is made to impress facts upon the students by means of object lessons, and to further impress upon them that it is only by the application of scientific facts that agriculture and agriculturists can be placed upon the plane where they belong.

The proper construction of a plow, for instance, is shown to depend upon the laws of the inclined plane; the principles of the lever are pointed out in the differing movements of the thoroughbred and cart horse; the result of scientific buildings, and the immense advance which has already been made in agriculture in the few years since the time when binders were unknown and artificial fertilizers existed only in the brains of a few theorists, is held up as an earnest of what may yet be done by a judicious application of scientific principles.

Particular stress has to be laid on the practical connection between science and agriculture, to overcome the prejudice which many boys bring to the college against what they have heard decried as book farming, and which they are apt at first to extend to whatever is new to them.

The same system of instruction is used with each subject.

If, for instance, a particular crop, as corn, be under consideration, the plant is first studied in the class-room, where its habits, chemical composition and uses are discussed with the various methods of cultivation.

From time to time, during the preparation of the land and the growth of the crop, the class is taken to the field where the work is being done, to inspect, and perhaps take

part in it. Where different fertilizers have been used, or different systems of cultivation employed, the differences are pointed out, and the class encouraged to draw their own deductions as to the effects.

If cattle-feeding is being considered, the composition of the animal is first studied, then the composition of the various cattle foods and their digestive co-efficients. From these are deduced a properly balanced ration, and then are shown the effects of proper and improper proportions in actual feeding experiments.

In detail, the course of instruction in the Agricultural Department of the College is as follows: freshman year, first, a general outline of agriculture, including the preparation of soils, cultivation and saving of crops, care of stock, &c. This is elementary enough to be readily understood, and yet serves as an introduction to the more detailed study of the several divisions of the subject. The study of breeds of stock, the elementary principles of mechanics and crops occupy the rest of the year. In the sophomore year, the ground covered includes the study of farm implements and machinery, the structure, chemical analysis and manner of growth of crops and the breeding of stock. The work of the junior year includes the comparative chemistry of soils and plants, plant-feeding and the action of fertilizers, soil physics and drainage. The senior course is one of specialties, including dairying, stock-feeding and other forms of animal husbandry, or such other advanced topic as the individual student may elect.



CHEMICAL LABORATORY—FERTILIZER DEPARTMENT.
STUDENTS AT WORK.



CHEMICAL LABORATORY—GENERAL CHEMISTRY.

SENIOR CLASS AT WORK.

CHEMICAL DEPARTMENT.

Prof. H. B. McDonnell, M. D., B. S.

The course in chemistry begins with the Sophomore year. The text-book used is Remsen's "Introduction to the Study of Chemistry." Three hours per week are allowed for this subject the first term, and four the second. This is divided between the lecture room and the laboratory. Each student prepares the common gases, and performs experiments to familiarize himself with the facts presented.

Qualitative analysis is taken up at the beginning of the junior year. Hill's "Lecture Notes on Qualitative Analysis" is used as a guide. The most of the work of this year is in the laboratory. Students in the agricultural and scientific courses continue chemistry during the second term of the junior year. Qualitative analysis is continued. The blow-pipe is used to determine the more common minerals and ores. Quantitative analysis is commenced.

During the senior year students in the agricultural course analyze fertilizers, fodders, milk, butter, etc., and a course of lectures is given on agricultural chemistry.

Students in the scientific course take either organic chemistry or chemical technology, instead of agricultural chemistry.

Students in the chemical laboratory are required to pay for all apparatus destroyed or damaged.

NATURAL HISTORY DEPARTMENT.

Prof. Martin P. Scott, M. D.

PHYSICAL GEOGRAPHY

views the surface of the earth, its waters and its enveloping atmosphere; the terrestrial machinery, and the operation of the physical forces by means of which the earth is fitted for the abodes of its fauna and flora. Text-book, Maury's Physical Geography.

ELEMENTARY GEOLOGY

treats of the actions of those forces which have shaped the earth, and which are constantly at this time at work. It gives also a brief account of the succession of events on the earth's surface, together with the history of organic life which characterized the four grand divisions of the earth's history, and their subdivisions.

A cabinet of minerals illustrates that part which treats of crystalline rocks. Text-book, Shaler's First Book of Geology.

HUMAN PHYSIOLOGY

treats of the functions of the organs of the human body and how their actions are brought about. As much anatomy is taught by plates and models as is necessary to understand the working of the machine during life.

Text-book, Huxley's Elements of Physiology.



BIOLOGICAL LECTURE ROOM AND LABORATORY.



LECTURE ROOM AND LABORATORY OF AGRICULTURE AND BOTANY.

ZOOLOGY

is the natural history of animals. It embraces comparative anatomy and physiology, distribution of animals, systematic zoology and taxonomy.

Our aim is to present clearly the established facts and principles of zoology.

Method of teaching, by text-book, recitation and lecture, as no text-book can supersede oral instruction.

As much time as possible is devoted to practical work.

Text-book, Orton, Comparative Zoology.

BIOLOGY.

We have two objects in view: to teach biology as a part of a liberal education, and to treat it as a part of the agricultural course of the college; for it may be said that in a large degree agriculture is biology applied, its various branches treating of the phenomena manifested by living plants and animals. The types selected from the animal and vegetable kingdoms are designed to illustrate the chief modifications of structure and physiological processes. As much time as possible is devoted to practical work.

BOTANICAL AND HORTICULTURAL DEPARTMENT.

Prof. James S. Robinson.

In this day of advanced and advancing agricultural work, a knowledge of plant life is an essential to the successful

prosecution of all divisions of the agriculturist's labors. To compass this requirement, the outline of a course of study is given below. A close adherence to the same will well equip a student for the intelligent prosecution of this line of work:

Fall term, Senior class.—Lectures on histological, physiological, systematic and economic botany, primary and secondary effects of pollination, cultivation and handling of fruits for market.

Fall term, Sophomore class.—Practical and recitative work, use of the microscope, physiological botany, theory and practice of budding, grafting and multiplication of varieties.

Fall term, Freshman class.—Practical and recitative work, use of microscope, structural and systematic botany.

Spring term, Junior class.—Practical and recitative work, physiological, systematic, histological and economic botany, cultivation of fruits and vegetables.

DEPARTMENT OF LANGUAGES.

Prof. Thomas Humphreys Spence.

LATIN.

The course of study in this branch is given with two ends in view, *i. e.*, first, to train the growing mind into accurate and close methods of reasoning; second, to give the student a more thorough and comprehensive knowledge of his own language than he might otherwise acquire.



LECTURE ROOM OF THE CHAIR OF LANGUAGES.

These aims are constantly kept before the student, so that he may not begin the work without motive, and he is made to realize the value of Latin as a factor in the complete understanding of its resultant tongue, the English.

To accomplish the first mentioned end, accuracy of thought, special attention is given to Latin syntax and *idioms*.

The study of syntax is greatly facilitated by work in Latin prose composition, and exercises are submitted every week during the first three years for criticism and correction.

After having been thoroughly grounded in the forms and a few primary constructions of the language, the student begins reading Sallust's Jugurthine War, during the reading of which he is made to evolve his own rules of syntax from the text read. These rules he verifies by reference to some standard grammar; this constitutes the work of the freshman year.

The sophomore year is devoted to Caesar's Gallic War, a portion of Virgil's Aeneid, Latin prose composition, and lectures upon syntax, mythology and prosody.

In the junior year, Virgil is completed, and also the orations of Cicero, accompanied by Latin prose composition and lectures and the reading at sight of Cornelius Nepos.

In the senior year, the course is concluded with the reading of Horace and Tacitus, and sight reading from Ovid's Metamorphoses.

FRENCH AND GERMAN.

In addition to their value as a factor in the education of every man who has to do with citizens of France or Germany, a

knowledge of these languages appears invaluable when we think of the many French books and periodicals devoted to agriculture and its kindred sciences. These are rarely translated into our language, and an ability to read them readily opens an avenue to that knowledge, which can be obtained in no other way.

FRENCH.

In this branch the first year's work is devoted to forms, idioms and conversation, with the reading of some elementary work, such as Rongemont's "La France." In the second year, French journals are read, and some scientific work written in French. A readiness of pronunciation and translation is insisted upon, and, reading at sight of easy French, forms a part of the work.

GERMAN.

On account of the large percentage of Germans in our population, a speaking knowledge of this language is very important, and special attention is given to conversation throughout the course.

After a short course in the elements, the student takes up some easy work, such as Lessing's "Minna von Barnhelm." In the second year, the work is concluded with the reading of German journals and scientific matter.



BATTALION OF CADETS.

DEPARTMENT OF MILITARY SCIENCE.

Lieut. John S. Grisard, 2nd Lieut., 13th U. S. Infantry.

The sophomore class will hold recitations one hour per week, in the "Infantry Drill Regulations, United States Army," and in the "Manual of Guard Duty, United States Army."

The junior class will recite twice a week—the textbooks used being the same as in the sophomore class, with the addition of "Hamilton's Art of War," supplemented by lectures.

The senior class will hold two recitations per week in the "Drill Regulations and Guard Manual." They will also use as a text-book "Mercur's Elements of the Art of War." There will be delivered to this class a course of lectures on the preparation of the usual reports and returns pertaining to a company; on the history, organization and administration of the United States Army and Militia; on the mustering of the militia into the service of the United States; on the relations of the military to the civil authority; on the methods of dealing with riots; on the rights and duties of military officers; on military law and courts-martial; on various topics under the Art of War; and on the principle battles and campaigns of history.

In addition to the course of theoretical instruction here outlined, four hours per week will be devoted to the practical instruction of all classes in the United States Infantry Drill

Regulations, in small arms target practice, signaling, guard duty, various problems of minor tactics, and, to some extent, instruction in castrametation.

The course of practical instruction will further include such portions of the Artillery Drill Regulations as pertain to the formation of detachments, manual of the piece, mechanical maneuvers, aiming and firing drills.

The regular competitive company drill for the battalion flag, will be held February 22, 1894.

A target practice competition will be held near the end of the year—a gold medal to be presented the successful competitor.

It is proposed, if found practicable, to invite all other military institutions in the State to compete annually with our own, in a battalion drill, at such time and place, and under such conditions as may be agreed upon—a Maryland State flag to be presented the successful battalion, and held by it until the succeeding annual competition.

PREPARATORY DEPARTMENT.

Prof. H. T. Harrison.

In order to afford facilities for instruction to students of sufficient years, but who were imperfectly prepared for the freshman class, the Preparatory Department was inaugurated in 1892, and from its inception the patronage it has received has proven very gratifying and highly satisfactory.

The students of this department are instructed in military tactics, and have the same attention and accommodations as those of the regular college classes. Their study is supervised each evening by an instructor, and they are required to retire earlier; however, a longer period of recreation is allowed, and a greater amount of outdoor exercise is insisted upon than among regular students.

A two years course has been elaborated, and such students as have made satisfactory progress in the primary principles of English, arithmetic and geography, and can write an intelligible hand, are admitted to the department distinguished as class B.

For entrance to the higher grade, or class A, proficiency in the following branches is required: Arithmetic, as far as percentage; geography, completed; history, outline of United States; orthography, technical grammar and ability to write a creditable essay; penmanship.

The course of instruction in this department is directed with a view to furnish the college student with a thorough drill in the elementary and fundamental principles which underlie the collegiate course, so that he may not be hampered by any deficiency which causes so much embarrassment to the poorly prepared college student.

Individual attention is paid to each student, and he is taught the art of study in such a way that he acquires knowledge with greater ease, and hence with far more zeal, than the student of crude and undrilled mind. After

he has satisfactorily completed the branches required in class A, he is admitted to the freshman class of the college without further examination.

DEPARTMENT OF PHYSICAL CULTURE.

Prof. H. M. Strickler.

Sana mens, in corpore sano, is the twin nature of our instruction. During the past year an imposing building for a gymnasium has been erected. This will be supplied with every facility for the proper development of the physical man.

Exercise here under careful guidance will be required from every student.

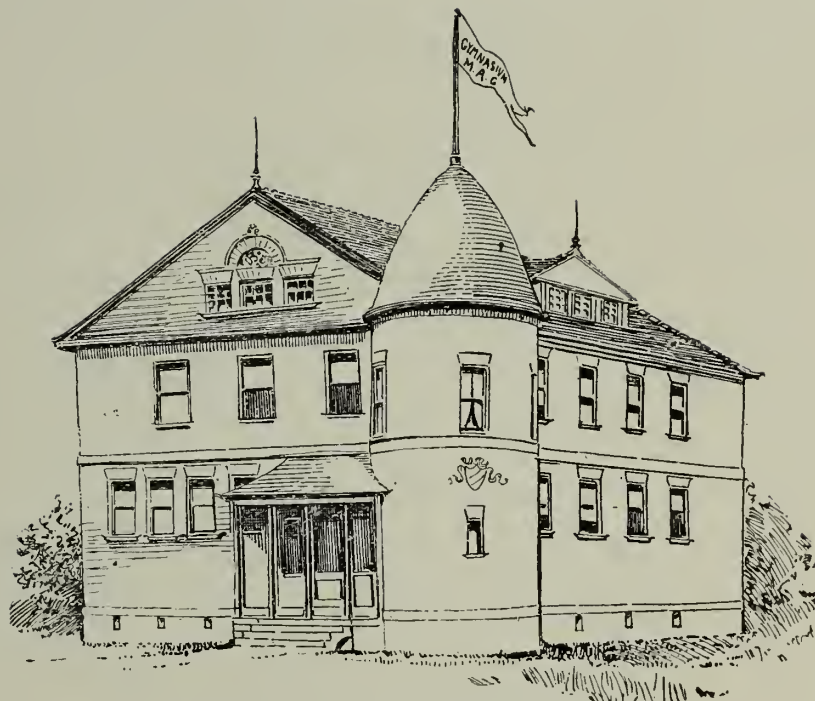
THE ATHLETIC ASSOCIATION ORGANIZATION.

First Term.

H. M. STRICKLER,	PRESIDENT.
SOTHORON KEY,	VICE-PRESIDENT.
J. W. LAWSON,	RECORDING SEC'Y.
W. W. SKINNER,	COR. SEC'Y.
RICHARD FUE,	TREASURER.
H. C. JONES,	CENSOR.

Second Term.

T. H. SPENCE,	PRESIDENT.
SOTHORON KEY,	VICE-PRESIDENT.
W. W. SKINNER,	RECORDING SEC'Y.
P. C. PROUGH,	COR. SEC'Y.
H. C. JONES,	TREASURER.
C. H. WEIMER,	CENSOR.



NEW GYMNASIUM, WITH TOWER ADDED.

Membership in the organization is voluntary. A fee of fifty cents is charged for entrance, and a monthly due of twenty-five cents. From the members, the foot-ball team, base-ball nine and members of the tennis club are selected.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

The organization of a Young Men's Christian Association has been effected, and promises good work in this line for another year.

SOCIAL FEATURES.

The Glee Club, and the Rosburg Club are associations which cater to the social side of student life, all of which are encouraged by the present management as *recreations* for the re-creation of strength, to prosecute vigorously the main aim and object of student life,—a preparation for every duty involved in the highest type of American citizenship.

THE ALUMNI ASSOCIATION.

The officers of the Alumni Association are as follows:

M. C. HAZEN, Class '88,	-	-	President.
E. G. NILES, Class '89,	-	-	Vice-President.
H. C. SHERMAN, Class '93,	-	-	Secretary.
J. B. LATIMER, Class '91,	-	-	Treasurer.
DR. J. B. GRIFFITH, Class '75,	}	-	Executive Committee.
J. B. GRAY, Class '74,			
A. C. TOLSON, Class '88,			

The first session of the college opened October 5, 1859. It is earnestly desired to complete the roll of the Alumni. Any information leading to this will be thankfully received.

LIBRARY.

It will be a source of genuine pleasure to all interested in the college, to know that provision has at last been made for a home for a library. It will no doubt be a surprise to most of the old students to know that our nucleus for the formation of a library is very small. So important an adjunct to any institution certainly should not be permitted to languish. Any contribution to the library from well-wishers of the college will be thankfully received.

Examination Questions of A Preparatory Class for Admission to Freshman Class. June, 1893.

The following examination is that given to the A Preparatory Class at the end of the year, upon satisfactorily passing which, they were admitted to the Freshman Class of the college. All applicants for the Freshman Class will be subjected to a similar examination.

A previous knowledge of Latin is not made an essential for admission to the Freshman Class, although for obvious reasons such knowledge is desirable:

ARITHMETIC.

- (1). Divide the sum of 10.1010 and .0999 by their difference.
2-11 of 12 6-7
- (2). Simplify: $\frac{3-8}{5-6}$

(3). By selling cigars at \$7 per C., 3.11 of their cost is gained. Find selling price when gain equals 3-5 of cost.

(4). The cost of 50 gallons molasses is \$25. One-fifth of it leaked away, and 20 gallons were sold at 62 1-2 cents. For how much per gallon must the remainder be sold to gain \$5 on the whole?

(5). An expressman engaged to carry 100 vases on condition that he was to receive 25 cents for every one delivered safely, and forfeit \$1.25 for every one broken. He received \$16. How many did he lose by breakage?

(6). Divide 200 miles, 56 rods, 3 yards, 2 feet by 121.

(7). How many yards of carpet, 3-4 of a yard wide, will be required for a room 36 feet long and 27 feet wide? Find cost of carpet at \$2 50 per yard.

(8). Find the cost of plastering the walls and ceiling of a room 36 feet long, 27 feet wide and 18 feet high, at 25 cents per square yard, allowing 45 square yards for door, etc.

(9). How many bricks, 8x4x2 inches, will be required for the walls of a house 60 feet long, 40 feet wide and 15 feet high, if the walls are 3 feet thick?

(10). How many barrels will a tank hold 30 feet 3 inches long, 16 feet wide and 6 feet 4 inches high?

(11). Find the time in Calcutta (88°27'E.), when it is noon at Boston (71°3'30"W.)

(12). A grocer lost 5 per cent. by selling a 50-pound tub of butter for \$15 20. Find cost of the butter per pound.

(13). A commission merchant received \$20,400 with which to purchase coal at \$6.00 per ton, after deducting 2 per cent. for commission. How many tons did he buy?

(14). Find interest on \$8,000 from November 17, 1875, to February 3, 1883, at 6 1-2 per cent.

(15). " \$1,000. SAVANNAH, GA., Oct. 4, 1884.
Six months from date, for value received, I promise to pay to the order of William Procter one thousand dollars, with interest at 6 per cent.
JOS. WHITELEY."

Discounted December 31, 1884, at 8 per cent. Find the proceeds.

(16). A man having 36 shares of 6 per cent. railroad stock, sold the same at .75, and bought city stock (10 per cent.) at 1.125. Which paid the better dividend, and how much?

(17). If 18 men can dig a trench 200 yards long, 3 yards wide and 2 yards deep, in 6 days of 8 hours each, in how many days of 10 hours each can 10 men dig a trench 100 yards long, 4 yards wide and 3 yards deep?

(18). A grocer having sugars worth 5, 6, 9 and 10 cents, wishes to make a mixture of 180 pounds worth 7 cents per pound. How many pounds of each can he take?

(19). Find the square-root of .180625, and the cube-root of .357911.

(20). Over how many acres of grass can a horse graze that is tied by a rope 300 yards long to a stake?

ALGEBRA.

$$(1). 16 - x - [7x - \{8x - (9x - \frac{1}{3}x - 6x)\}] = ?$$

$$(2). (a^2 + 2ab + b^2)x(a^2 - 2ab + b^2) = ?$$

$$(3). (2x^4 + 2x^2y^2 - 2xy^3 - 7x^3y - y^4) \div (2x^2 + y - xy) = ?$$

$$(4). \text{Factor } x^4 + 10x^2 + 16; a^2 - 8a + 16; m^2 - 2m - 24; n^2 + 3n - 18.$$

$$(5). a^2 - 2ay + y^2 - x^2 - 2bx - b^2.$$

$$(6). \text{Find the G. C. D. and the L. C. M. of } 2x^3 - 1x^2 - 13x - 7 \text{ and } 20x^2 + 21x - 5.$$

$$(7). \text{Reduce } \frac{a^2 - 2a - 3}{a^2 - 10a + 21} \text{ to lowest terms.}$$

$$(8). a + x + \frac{a^2 + x^2}{a - x} = ?$$

$$(9). \text{Simplify } \frac{1}{x-1} - \frac{1}{x+2} - \frac{3}{(x+1)(x+2)}$$

$$(10). \text{ Simplify } 1 - \frac{1}{1 + \frac{1}{x}}$$

ENGLISH.

(1). Dictation exercise, extract from Swinton's History, Napoleon's Russian Campaign.

(2). Define and illustrate: domestic, revelry, access, coincident, systematic, sanction, dissention, precedent, assassin, terror.

(3). Diagram, etc.: "He who reads much always has a ready vocabulary; but he who spends his time in idle nothingness only engenders ignorance."

(4). Parse the words underlined in the following selections:

a.—"Three weeks we westward bore,
And when the storm was o'er,
Cloud-like we saw the shore
 Stretching to leeward;
There, for my lady's bower,
Built I the lofty tower
Which to this very hour,
 Stands looking seaward."

b.—"And like those waters rushing
Among the wooden piers,
A flood of thoughts came o'er me
That filled my eyes with tears."

(5). Explain the difference between the direct and the indirect object of a verb.

(6). Distinguish between the meanings of little in "He has

but little money," and "He is a little fellow."

(7). Give the principal parts of: go, pay, sit, ride; and the participles derived from each.

(8). Explain the difference between a possessive pronoun and a pronoun in the possessive case.

(9). Define simple, complex and compound sentences.

(10). Write a complex sentence; make the same simple, and tell what the process is called.

(11). Compare—least, useful, beautiful.

(12). Give the classes of pronouns, and define antecedents.

(13). Give the divisions of time, and name all the tenses.

(14). Give the signs of the potential and the subjunctive modes.

GEOGRAPHY—POLITICAL.

(1). State the relative values of the commerce of the Mississippi and the Amazon. Explain.

(2). What kind of a government is that of Russia? Who is the present ruler? What is done with convicts there?

(3). To what country does Alaska belong? When and from what country was it purchased? Why is it valuable?

(4). For what are the Swiss noted? What kind of a country and government have they?

(5). Sketch the route from New Orleans to Calcutta, touching at New York and Liverpool.

PHYSICAL GEOGRAPHY.

(1). A—By the early astronomers, what one of the planets was supposed to be the centre of the universe? B—What is meant by the Copernican theory? C—Give the planets of the solar system in order, and state how they are classified. D—Describe the nebula theory.

(2). A—How many motions has the earth? B—What produces the change of seasons and the alternation of day and night? C—Tell how the earth is best adapted for human habitation.

(3). A—Have we any evidence of the internal heat of the earth? B—Give a full account of the formation, distribution and classification of volcanoes, and state the fundamental cause of volcanic action. C—How do you account for earthquakes?

(4). A—What is said of land and water hemispheres? B—According to their relief, how are the various forms of land classified? C—How are plains classified? D—What reason can you give for plains being centres of civilization? E—What are the general decided features of continental relief? F—Describe the relief of North America and Europe. G—How are islands formed and how classified?

(5). A—Give the physical properties of water. B—What effects do evaporation and condensation exert? C—How are the currents of the sea classified? D—Describe the Gulf stream

PHYSIOLOGY.

- (1). Name the bones of the body.
- (2). Describe the spinal column.
- (3). Mention some benefits derived from bathing and exercise.
- (4). State the relative importance of lime and iron in the blood.
- (5). By what means is the food made to nourish the body?
- (6). Describe the blood.
- (7). Describe the heart.
- (8). Give the number of teeth in each set and their names in the second.
- (9). Trace the blood in one complete circulation.
- (10). Give the constituents of breathed air, and state how purified.
- (11). Name two classes of nerves and the functions of each.
- (12). State the uses of reflex action.
- (13). Describe the sense of touch.
- (14). State some of the relations between the different senses.

(15). Describe the eye-ball.

(16). Name the divisions of the ear, and describe the tympanum.

(17). State some evil effects of alcohol upon the system.

(18). Name the kinds of perspiration with their uses.

(19). Name the divisions of the brain and their special functions.

(20). Write briefly upon the following topic: "The time and manner of bathing."

BOOKKEEPING.

G. P. Mordecai and H. Stanford form a partnership for the purpose of conducting a wholesale shoe business; gains and losses to be divided equally.

G. P. Mordecai invests cash \$500; merchandise amounting to \$3,000. He holds James Robinson's note, dated August 1, 1892, at 12 months, for \$2,000. A. Arthur holds his note, dated November 1, 1892, at 12 months (which the firm assumes), for \$1,000.

H. Stanford invests cash \$5,000; house and lot worth \$3,000. He holds M. Brown's note, dated January 1, 1893, at 6 months, for \$1,000.

1st. Sold J. H. Shipley 400 pairs shoes at \$5. Received in part payment, cash \$1,000; balance sold on account.

2nd. Bought of Levin Lake, on firm's note, at 6 months, 1,000 pairs shoes at \$3.

3rd. Paid cash for store expenses, \$100.

4th. Bought of James Robinson, for cash, 1,000 pairs shoes at \$3.

6th. Sold J. H. Shipley, on account, 500 pairs shoes at \$5.

7th. Sold A. Arthur, on his note at 3 months, 400 pairs shoes at \$5.

8th. Bought of Thomas Fickling, on account, 400 pairs shoes at \$3.

9th. Paid cash for store expenses, \$200.

11th. Sold C. Zimmerman, for cash, 300 pairs shoes at \$5.

13th. Paid G. P. Mordecai, on private account, \$500. Paid H. Stanford, on private account, \$300.

14th. Sold J. H. Shipley 1,500 pairs shoes at \$3. Received in part payment, cash \$1,500; in part, his note, at 60 days, for \$2,000. Balance sold on account.

15th. Paid cash for store expenses, \$120.

Merchandise remaining unsold, \$900.

Write up set in day-book, cash-book and ledger. Make out statement showing condition, etc., at close.

Write out in full all the notes mentioned herein.

HISTORY.

(1). Write a brief sketch of the colonial history of Rhode Island, Pennsylvania, New York, Maryland, Virginia and Georgia.

(2). State briefly the causes which led to the French and Indian war, and tell the effect of this war upon our people.

(3). State the real and apparent causes of the American Revolution, and name the leaders of the opposition from the different States.

(4). What were the most important battles of the first and sixth years of the Revolutionary war, and what was the result of each?

(5). What kind of government existed in the United States at the close of the Revolutionary war, and what was done to strengthen the Union?

(6). What were the first political parties? How did they originate? Give the principles of each.

(7). What were the functions of the general government?

(8). State when and where Washington was inaugurated.

(9). When, by whom and under what circumstances was the expression, "Millions for defense, but not one cent for tribute!" used?

(10). When, by whom, from whom and for what amount were Florida and Alaska purchased?

(11). What measure did the Whig party advocate?

(12). During whose administration was the bank question violently agitated?

(13). Who was the author of the expression, "To the victors belong the spoils"?

(14). When was Texas admitted to the United States? State the real cause of the Mexican war.

(15). What was the plan of the Mexican war, and by what three generals was it carried out?

(16). What did the compromise of 1850 embrace?

(17). Who delivered the Dred Scott decision? Explain the same.

(18). During whose administration did the "Reconstruction" take place? State the most important events of that administration.

(19). What were the 13th, 14th and 15th amendments to the Constitution?

(20). Name the four great issues of the last Presidential campaign. Name President Cleveland's Cabinet officers.

Admission to the College Preparatory Class can be granted upon the applicants passing satisfactory examinations upon Arithmetic, as far as the completion of common fractions, Elementary Geography, Elements of Grammar, Reading of prose at sight.



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PRESS OF
THOMAS & EVANS,
BALTIMORE, MARYLAND,
+ 1893, +
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